

### REMARKS

Claims 1-46 were pending in the above-identified application. Of these, claims 1-31, 34-36, and 40-43 stand rejected and claims 32, 33, 37-39, and 44-46 are objected to. Applicants, having amended the claims, respectfully request reconsideration.

### Objections to the Drawings

The examiner objected to the drawings for failing to show a number of features recited in the claims. Applicants treat each objection in turn.

Claim 3: the examiner believes that “none of the drawings show the ‘comparison circuit’ of claim 1 in which a comparison is made with “expected data” (Office action, page 2). Applicants disagree. Figure 7 supports the recited “expected data.” As applicants’ specification notes, in the case of Figure 7, “the expected data is the input data sampled by sampler 705 and captured in shift register 730” (para. [0049]). Receiver 700 includes two samplers 705 and 710 so that one can be used as a source of “expected data,” which facilitates margin testing on live data.

Claims 8-11: the examiner argues that the claims are based upon figure 7 or figure 9, neither of which shows the “three samplers” of claims 8-11. The examiner notes that three-sampler embodiments are shown in figure 12, but warns that “[c]are should be taken to properly claim subject matter of only one embodiment of the invention in any given independent claim group” (office action, page 2). The examiner does not provide support for this latter assertion, and applicants do not understand the objection. Figures 7 and 12 both depict embodiments that support claim 1 (i.e., each figure depicts a system that supports every element of claim 1). As such, it is entirely proper for dependent claims to recite particular features from each of those embodiments. However, the above amendments incorporate the language of claim 8 into claim 1, which may well support a restriction requirement. The examiner suggests as much on page 2 of the office action. Applicants respectfully request the examiner call the undersigned representative with any suggested restriction.

### Claim Objections

Claim 6 is objected to because the examiner believes the “second clock signal” lacks antecedent basis (office action, page 3). Claim 6 depends from claim 1, however, and claim 1

recites the requisite “second clock signal.” The objection to claim 6 should therefore be withdrawn.

Claim 7 is objected to because the examiner believes the “first clock signal” lacks antecedent basis (office action, page 3). Claim 7 depends from claim 1 via claim 6, however, and claim 1 recites the requisite “first clock signal.” The objection to claim 7 should therefore be withdrawn.

#### Rejections Under 35 USC §112

Claims 13, 27, and 31 stand rejected under 35 USC §112, first paragraph, for failing to comply with the enablement requirement.

#### Claim 13

The examiner believes those skilled in the art would not be able to “alter the phases of the clock signals” responsive to the output of logic element 755, which supports the “comparing” claimed, because the output of logic element 755 “is not fed into the CDR 756 for adjusting the phases of the clock signals RCLK1 and RCLK2” (Office action, page 4). From this, the examiner concludes that “one skilled in the art is left without any direction by the specification as to how the comparing may alter the phases of the clock signals” (Ibid). With regard to the standard for enablement, the MPEP provides the following analysis from the Federal Circuit:

A patent need not teach, and preferably omits, what is well known in the art. *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987); and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984).

(MPEP 2164.01 Test of Enablement, emphasis added) With an understanding of the express preference for omitting well known features from the specification, applicants relied upon the common understanding of those of skill in the art to support phase adjustment based upon an error signal. While not required, applicants noted this reliance at a number of points in their specification. For example, “[t]he timing control circuitry is omitted for brevity” (para. [0038]); and “[m]ethods and circuits for adjusting clock phases and reference voltages are well known in the art, and are therefore omitted here for brevity” (Para. [0064]).

The examiner's rejection even hints at the simplicity of providing the requisite phase control: "the output of [the ERR logic element 755] is not fed into the CDR 756 for adjusting the phases" of the clock signals" (Office action, page 4). Surely those of skill could make the requisite connection, particularly in light of the fact that, as applicants' specification notes, "methods and circuits for adjusting clock phases...are well known" (Para. [0064]).

Those of skill in the art do not require that Figure 7 show an actual connection between elements 755 and 756. Indeed, as the examiner notes on page 3 of the office action, the figures only require that the drawings include "[a]ny structural detail that is essential for a proper understanding of the disclosed invention..." (Office action, page 3, citing MPEP 608.02(d), emphasis added). Applicants provide ample support for how to generate error signals in various embodiments and explain how such error signals are used to vary the phases of clock signals using conventional methods and circuits. Those of skill in the art do not require more to implement the invention of claim 13. The rejection of claim 13 should therefore be withdrawn.

Claim 27 stands rejected for the reasons presented above for claim 13. The foregoing arguments apply equally to claim 27, so the rejection of claim 27 should be withdrawn.

Claim 31 recites a method in a subset of one data series is compared against another series. The examiner argues that this claim is not enabled because the "comparing circuit" of Figure 7, illustrated as reference 755, compares every output from the sampled series. Applicants are unclear as to why the examiner is limiting the disclosure to Figure 7. The Federal Circuit expressly notes that:

Any part of the specification can support an enabling disclosure, even a background section that discusses, or even disparages, the subject matter disclosed therein. *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 77 USPQ2d 1041 (Fed. Cir. 2005)(discussion of problems with a prior art feature does not mean that one of ordinary skill in the art would not know how to make and use this feature).

(MPEP 2164.01 Test of Enablement, emphasis added) The specification provides a number of examples of comparison circuits that match a subset of one data series against another series. Applicants direct the examiner's attention to the example of Figure 13 in which errors are evaluated using a pattern-matching circuit 1315 that limits the comparisons to particular subsets

of the incoming data. Figure 13 and the associated description are certainly enabling. The rejection of claim 31 should be withdrawn for at least this reason.

#### Rejections Under 35 USC §103

Claims 1, 2, 4-7, 12-26, 28-30, 34-36, and 40-43 stand rejected as unpatentable under 35 USC §103(a). In particular:

- Claims 1, 4-7, 12, 13, 15-19, 21, 23, 24, 26, 34, and 40-43 stand rejected as unpatentable over Matsumoto et al. in view of Lee et al.
- Claims 2, 14, 25, 35, and 36 stand rejected as unpatentable over Matsumoto et al. in view of Lee et al., and further in view of Best et al.
- Claims 20, 22, 28, 29, and 30 stand rejected under 35 USC §103(a) as unpatentable over Matsumoto et al. in view of Lee et al., and further in view of Tobias et al.

Applicants treat each rejection in turn.

#### Claims 1, 2, and 4-7

Claim 1 is amended to include the subject matter of claim 9, and therefore distinguishes the cited references, separately or in combination, for at least the same reasons claim 9 distinguishes.

Claims 2 and 4-7 depend from claim 1, and consequently distinguish the cited references for at least the same reasons claim 1 distinguishes. The rejections of claims 2 and 4-7 should therefore be withdrawn.

#### Claims 12-22

Claim 12 is amended to include the subject matter of claim 15, which the examiner argues is obvious over Matsumoto et al. in view of Lee et al. (Office action, pages 7 and 8). Applicants disagree.

Original claim 15, now claim 12, recites a method in which a series of input symbols is sampled twice using different clock phases and sample voltages. The examiner cites Matsumoto et al. for their teaching of multiple samplers using different sample voltages, and Lee et al. for their teaching of multiple samplers using different clock phases. As for the requisite motivation or suggestion to combine, the examiner merely states that the combination “would permit more flexibility in the reception and analysis of the input data” (Office action, page 6).

Applicants understand the examiner to be arguing that one could somehow merge the systems of Matsumoto et al. and Lee et al. to produce the system of claim 15 (now claim 12), and would be motivated to do so for “more flexibility.” Applicants agree that “more flexibility” is sometimes desirable, but fail to see how the examiner proposes to combine the references to achieve this result. The examiner has pointed to nothing in the references or elsewhere that teaches how one might so combine the references’ teachings, or even suggests the desirability of the combination. For example, it is not clear why “more flexibility” is important for the examiner’s proposed combination. The examiner therefore appears to be using impermissible hindsight to reconstruct the claimed system. “[I]t is impermissible to reconstruct the claimed invention from selected pieces of prior art absent some suggestion, teaching, or motivation in the prior art to do so” (*Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051-52 (Fed. Cir. 1988)). It is the prior art, not applicants’ invention, that must be the guide for combining the references. “It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve [a desired result].” (*Orthopedic Equip. Co. v. United States*, 702 F.2d 1005, 1012 (Fed. Cir. 1983)).

In failing to provide the requisite support for the suggested combination, the examiner has failed to establish a *prima facie* case of obviousness. Furthermore, applicants do not in fact find the requisite teaching in the cited references, and therefore consider the claims to distinguish the cited references. The rejection of claim 12 should therefore be withdrawn. Naturally, the rejection of claim 15 is moot in light of its cancellation and incorporation into original claim 12.

Claims 13, 14, and 16-22 depend from amended claim 12, and thus distinguish the references for at least the same reasons claim 12 distinguishes. The rejections of claims 13, 14, and 16-22 should therefore be withdrawn.

#### Claims 23-26 and 28-30

Claim 23 is amended to include the language of claim 26. The rejection of claim 26 is therefore material. Similar to the discussion of claim 15, above, applicants understand the examiner to be arguing that, if merged, the combination of Matsumoto et al. and Lee et al. would teach each step of claim 23, and those of skill in the art would be motivated to so combine the teachings of the two references. The examiner does not speak to the motivation for

combining the references, and the rejection fails to establish a *prima facie* case for this reason alone. Even assuming the motivation is for the additional “flexibility” noted in connection with the rejection of claim 1, the examiner has pointed to nothing in the references or elsewhere in support of this motivation. As stated previously, the examiner appears to be using hindsight, which is impermissible under *Uniroyal, Inc. v. Rudkin-Wiley Corp.* and *Orthopedic Equip. Co. v. United States*, the holdings of which are noted above. The rejection of claim 23 should therefore be withdrawn. Claim 26 is canceled due to its subject matter being incorporated into claim 23, so the rejection of claim 26 is moot.

Claims 24, 25, and 27-30 depend from claim 23, and therefore distinguish the references for at least the same reasons claim 23 distinguishes. The rejections of claims 24, 25, and 27-30 should therefore be withdrawn.

#### Claims 34-36

Independent claim 34 is amended to include the subject matter of claim 37, which the examiner considers allowable subject matter (Office action, page 14). This amendment places the subject matter of claim 37 in independent form. Claim 34 is therefore allowable. Claim 37 is canceled in light of the amendment.

Claims 35 and 36 depend from claim 34, and are therefore allowable for at least the same reasons claim 34 is allowable. The rejections of claims 35 and 36 should therefore be withdrawn.

#### Claims 40-43

Independent claim 40 is amended to include the subject matter of claim 44, which the examiner considers allowable subject matter (Office action, page 14). This amendment places the subject matter of claim 44 in independent form. Claim 40 is therefore allowable. Claim 44 is canceled in light of the amendment.

Claims 41-43 depend from claim 40, and are therefore allowable for at least the same reasons claim 40 is allowable. The rejections of claims 40-43 should therefore be withdrawn.

#### Allowable Claims

The examiner deemed claims 32, 33, 37-39, and 44-46 to be allowable if amended to include all the limitations of any base and intervening claims. Applicants have so amended claims 32, 33, 37-39, and 44-46 to place them in condition for allowance.

CONCLUSION

Applicants believe the pending claims to be in condition for allowance, and consequently request the examiner issue a notice of allowance. If the examiner's next action is other than the allowance of the pending claims, the examiner is requested to call applicants' representative at (925) 621-2113.

Respectfully submitted,



Arthur J. Behiel  
Attorney for Applicant  
Reg. No. 39,603

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Laurie Moreno  
Name



Signature